

## Characterization of Jupiter's Atmosphere from Galileo and Earth-Based Observations During the Ganymede-1 and Ganymede-2 Orbit Encounters

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Galileo remote sensing data are examined in the context of an extensive set of earth-based observations supporting the Ganymede-1 and Ganymede-2 encounters. Movies of the Great Red Spot (GRS) in reflected sunlight, show large-scale flow; for example, the circular feature northwest of the GRS during G1 was one of several high-altitude systems moving westward with respect to the GRS. The southern part of the clear band surrounding the GRS was narrower at  $5\text{ }\mu\text{m}$  than  $8.57\text{ }\mu\text{m}$ , suggesting more cloud cover at depth than at the  $\text{NH}_3$  condensation level; this region was also warmer in the troposphere. High-altitude particles were found in the flow pattern "trailing" the GRS. The real-time NIMS G1 spectra sampled a region only moderately bright at  $5\text{-}\mu\text{m}$ , not a classical "hot spot". Synoptic middle-infrared spectra of this region complement NIMS spectra of the deep troposphere by constraining abundances of  $\text{NH}_3$  and  $\text{PH}_3$  at higher altitudes. The southern part of the North Equatorial Belt, observed by both NIMS spectra and PPR radiometry, was very active, generating classical bright "plumes" and dark ovals ("barges") for the first time in many months. A long-term program will continue to observe potential targets for the Galileo's atmospheric investigation.

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